

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	M09613	Client:	Alaskan Copper Works
Date Received:	10/04/12	Project:	Weld Cleaner M09613, F&BI 210070
Date Extracted:	10/09/12	Lab ID:	210070-01
Date Analyzed:	10/09/12	Data File:	210070-01.035
Matrix:	Wipe	Instrument:	ICPMS1
Units:	ug/wipe	Operator:	AP

Internal Standard:	% Recovery:	Lower	Upper
Germanium	111	Limit:	Limit:
		60	125

Analyte:	Concentration ug/wipe
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Chromium	8,800
Nickel	3,980
Copper	549
Zinc	364

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Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Alaskan Copper Works
Date Received:	Not Applicable	Project:	Weld Cleaner M09613, F&BI 210070
Date Extracted:	10/09/12	Lab ID:	I2-696 mb
Date Analyzed:	10/09/12	Data File:	I2-696 mb.030
Matrix:	Wipe	Instrument:	ICPMS1
Units:	ug/wipe	Operator:	AP

Internal Standard:	% Recovery:	Lower	Upper
Germanium	89	Limit:	Limit:
		60	125

Analyte:	Concentration ug/wipe
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Chromium	<2
Nickel	<2
Copper	<2
Zinc	<2

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Date of Report: 10/10/12

Date Received: 10/04/12

Project: Weld Cleaner M09613, F&BI 210070

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WIPE SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Chromium	ug/wipe	100	108	100	81-117	8
Nickel	ug/wipe	50	106	98	86-118	8
Copper	ug/wipe	100	107	98	86-116	9
Zinc	ug/wipe	100	111	103	84-121	8

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Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

ME 10-04-12 ATU

Phone # 266-571-6053 Phone # 266-582-4309

Page 5
THERALDINE TEST

☐ Standard (2 tablets)
☒ 20 mg 2/22/79

Sample charges submitted by:

☐ Diapers after 30 days
☐ Diapers samples
☐ Wipe swab with instructions

TABLET INFORMATION

Sample ID	Lab ID	Date	Time	Sample Type	# of contaminant	TFH-Diesel	TFH-Gasoline	TFH by 4000	VOC by 4000	SVOC by 4000	Notes
M08615	01	12/1/00	1:00	WPC	1						Analyte dirty section

	REG NAME	CORR ACT	DATE	TIME
✓	Gerald Thompson	REU	10/1/72	2108 hr
✓	D. L. rd	F & B I	" "	13.34

Samples received at 10 °C

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ENVIRONMENTAL CHEMISTS

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October 10, 2012

Gerald Thompson, Project Manager
Alaskan Copper Works
628 South Hanford
Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on October 4, 2012 from the Weld Cleaner M09613, F&BI 210070 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
ACU1010R.DOC